

The laboratory manual is composed of 3 types of experiments. **Guided inquiry** experiments ask you to use your data to find generalizations; therefore, this type is designed to be an introduction to the topic before it is discussed in lecture. The emphasis is on using your data. **Open inquiry** experiments require you to design an experiment concerning a topic that you have studied. The open inquiry labs deal with applying the idea in a new setting. The **skill building** experiments are designed to develop techniques, not necessarily new content knowledge.

Policy on Safety and Breakage

Before working in this laboratory/recitation portion of the course, every student must read the "Laboratory Safety" rules in the laboratory manual plus any Departmental Rules and agree in writing to abide by these rules. It is imperative for your safety that you and everyone around you strictly adhere to the Safety Rules. **Failure to comply with the safety regulations (e.g., by not wearing eye protection at all times; by wearing open-toed shoes, short skirts or shorts without also wearing a lab coat or apron; by running an unauthorized experiment; or by removing chemicals or equipment from the lab) may result in dismissal from this portion of the course or deduction of points on your reports.** You will be utilizing equipment furnished by the Chemistry Department. It is your responsibility to properly maintain the equipment while it is in your care. If equipment that has been entrusted to you is not returned in satisfactory condition, you will be held responsible for it.

Absences:

Excused absences must be reported to your lab teaching assistant (TA) in a timely manner with a written university excuse. A missed lab will be made up on Thursday evening 6-9 PM the week it was missed. Makeup quizzes will be given the next time you have a scheduled quiz.

Data Sheets:

A data sheet must be submitted at the end of the lab period to receive a grade for that day's experiment. The data sheet may not be graded in some sections; however, **the Report Form for the corresponding experiment will not be graded if the data sheet is not submitted the day the experiment is conducted.**

PreLabs and Reports:

For each experiment you will receive a total score between 20 and 0. Prelabs are worth 5 points, and the Report Form is worth 15 points. The Prelab Exercises associated with each experiment are due before you start the experiment. Report Forms are divided into Data, Analysis, and Postlab Questions. The Report Form **must reflect information obtained by you** while in the laboratory and recorded on your data sheets. The Report Form is due the week after the experiment was run. Neatness and completeness may be considered when points are assigned. Points will be deducted for materials not submitted on the date due. **Materials more than one week late will not be graded unless you have a university approved excuse.**

Calibrated Peer Review (CPR): This is web based software designed to promote writing in our classroom on topics important to chemistry. There will be two assignments and one replacement assignment. It is critical that they be done within the time frame allotted, because there is no way to handle late work. See CPR handout for more information. Each assignment will be worth 20 points, the same as a lab. All time are Central Time because the server is at TAMU.

Assignment 1: Plagiarism in TAMU Laboratories

Part A (Write): Mon 2-2, 6AM – Thurs. 2-12, midnight

Part B (Calibrate & Critique): Thurs. 2-12, midnight – Thursday 2-19 midnight

Assignment 2: Measurement & Significant Figures

Part A (Write): Mon. 2-23 6am - Thurs. 3-4 midnight

Part B (Calibrate & Critique): Thurs. 3-4, midnight – Thursday 3-11 midnight

Assignment 3: Designing the Atomic Structure of Copper

Part A (Write): Mon. 3-29, 6am - Thurs. 4-8 midnight

Part B (Calibrate & Critique): Thurs. 4-8, midnight – Thurs. 4-15 midnight

Lab/Recitation Quizzes and Written Final:

Three lab quizzes (20 points each, usually 3 or 4 points per question) are scheduled at various times during the semester. The quizzes will reflect what you should have gained from previous weeks' experiments, what you should master before beginning the current week's experiment, your ability to utilize techniques and concepts, and your understanding of the recitation/lecture topics discussed in lab. The Written Final is 40 points and is comprehensive over all parts of the lab. The Practical Final is 10 points, covering safety and techniques.

101 LAB SCHEDULE

YOU ARE RESPONSIBLE FOR THIS SCHEDULE AND ANY CHANGES THAT ARE ANNOUNCED.

Week:	Tentative Recitation Topics	Lab/ Activity	CPR	Report Due
1/19	No Lab this Week			
1/26	Introductions, Significant figures, Safety Review Open Inquiry Lab Prepare them for #2	Check in, read and sign safety agreement		
2/2	Review open Inquiry, Particle View, hydrated salts, chemical equations and reaction Stoichiometry (chp. 3)	#2-Cost of a Chemical Product Open Inquiry Lab	CPR Assignment 1A: write assignment M 2/2-R2/12	
2/9	Bunsen Burner operation, Vacuum Filtration, Review organic formulas	#4-Soap Making Skill Building Experiment	CPR Assignment 1A: write assignment M 2/2-R2/12	#2
2/16		Quiz 1	CPR Assignment 1B: calibrate & critique R2/12- R 2/19	#4
2/23	Graphing, Identifying gases, use of indicators, purpose of the experiment	#5-Reactions of Calcium A guided experiment	CPR Assignment 2A: write assignment M 2/23-R3/4	
3/1	Stoichiometry and % yield, hydrated salts, amphoterism, use of Bunsen Burner, Vacuum Filtration	#6 – Recycling Aluminum Cans Skill Building Experiment	CPR Assignment 2A: write assignment M 2/23-R3/4	#5
3/8		Day off due to CPR	CPR Assignment 2B: calibrate & critique R3/4- R 3/11	
3/15		Spring Beak		
3/22		Quiz 2		#6
3/29	Lewis Dot Structures, Molecular Structures and Covalent Bonding (Chp 7-8, p. 188 lab book)	#10 Shapes of Molecules and Ions A Guided Experiment	CPR Assignment 3A: write assignment M 3/29-R4/8	#10
4/5	Solution Stoichiometry, acid-base titrations, burets, citric acid, primary standard & standardization techniques using KHP (Chp 11)	#8 Analysis of a Carbonated Beverage A Guided Experiment	CPR Assignment 3A: write assignment M 3/29-R4/8	
4/12	Gas Laws, Stoichiometry with gases, collecting gas over water	#12 Alka Seltzer® An Application of Gas Laws A Guided Experiment	CPR Assignment 3B: calibrate & critique R4/8 - R 4/15	#8
4/19		Quiz 3		#12
4/26		Practical Final (10 pts) Final (40pts) Evaluations		

All missed work, make-up finals, requests for grade of “incomplete”, etc. must be completed and all forms submitted before 5PM 4/29 if they are to be in this semester’s records.

YOUR LAB SECTION NO. _____ (KNOW this number, USE it in all your emails, on exams, quizzes etc.)

Your LAB TA _____